5 Administrative Management

In this chapter, we present our proposal to address the areas of Administrative Management vehicles, equipment, and travel as required by agencies to perform their missions.

- **Facilities Management** – The maintenance, administration, and operation of office buildings, other buildings, and parking facilities that are owned or leased by the Commonwealth.
- **Fleet Management** – The maintenance, administration, and operation of vehicles and rolling stock including, cars, trucks, aircraft, and watercraft.
- **Equipment Management** – The maintenance, administration, and operation of machinery and other capital assets, exclusive of information technology.
- **Travel** – Activities associated with planning, preparing, and monitoring of business-related travel for the organization's employees.

Today, these processes and their associated financial data are diffused throughout the Commonwealth's agencies. Most every agency performs one or more of these functions. However, the costs associated with these functions are buried within agency operating budgets and difficult to isolate, consolidate, and analyze. Operational data is equally fragmented. Data about these resources is embedded in dozens of systems and databases throughout the Commonwealth, each designed to meet the needs of a particular agency or department. As a result, the Commonwealth is forfeiting the opportunity to reduce its costs and deliver a higher level of service to its stakeholders.

The remainder of this chapter presents our observations, recommendations, and proposed solutions to improve these processes on an enterprise-scale for the Commonwealth. We offer a common theme for all of these functions— implementation of standard processes, policies, and supporting information systems—without sacrificing the autonomy of agencies to determine how to best execute their missions to the Commonwealth's citizens.

5.1 Facilities Management

The Issue	The Solution	The Benefit
Operations and maintenance costs are increasing. A growing backlog of deferred maintenance creates a looming financial liability. There is no authoritative source about the Commonwealth's owned and leased properties, or its maintenance and operations costs.	Implementation of a total asset management approach to facilities management.	Makes facility costs explicit so that better decisions can be made. Reduces cost of facilities operations. Maximizes scarce resource use.

Facilities Management is one of four functions that compose the Administrative Tower in the Commonwealth's Enterprise Architecture. It involves the maintenance, administration, and operation of office buildings, other buildings, and parking facilities that are owned or leased by the state government.

The Commonwealth owns or leases a vast array of properties, including approximately 360,000 acres of land, 13,000 buildings, and 117 million square feet of building space. In addition, the Commonwealth has approximately 1,500 leases for an additional 14 million square feet of office space. Ascertaining the utilization and condition of these properties is a daunting task.

Historically, the management of facilities has received relatively little attention outside of the seat of government. The Department of General Services is responsible for oversight of processes and standards that govern the management of facilities. However, the operational and financial aspects of managing the Commonwealth's facilities (outside of the seat of government) has largely been left to the agencies.

Some strategic steps have been taken by the Commonwealth to consolidate the management of owned and leased properties. The Governor's executive order authorizing the Department of Real Estate Services (DRES) is beginning to yield some savings through smarter management of leased property. However, Team CGI-AMS recommends some initiatives that will enable the Commonwealth to further control costs and reduce liabilities.

5.1.1 As-Is Cost of Doing Business

During our recent Due Diligence effort, we collected data from twenty-nine agencies about the resources they apply to managing facilities.[1] This information is summarized in Exhibit 5-1 below. We then extrapolated this sample data to all business areas and present the results in Appendix A.

5.1.2 Commonwealth Process Environment and Architecture

The Commonwealth cannot easily determine the condition of its facilities.

The current state of the Commonwealth's facilities is not easily determined, since facility condition assessment, lifecycle planning, deferred maintenance impact, and everyday operating cost data are not readily accessible for consolidated reporting and analysis. The December 2004 Auditor's Interim Report (pages 5-6 paraphrased) describes the situation:

- Continuing surplus of unoccupied facilities.
- Over 40 percent of the agencies do not have preventive maintenance programs, thus increasing lifecycle maintenance costs.
- Half of the agencies do not have automated tracking of maintenance work.
- Of the agencies that do have automated tracking, only a small number can accurately track and estimate costs and future requirements.
- Facilities Operating expenses and Total (Operating plus Capital) expenses have been compared for 2003 and 2004 on pages 71 and 71 of the Auditor of Public Accounts Interim Report (December 2004) and are summarized in Exhibit 5-1 below.

Exhibit 5-1   Facilities Costs are Significantly Increasing

Year	O&M Cost per Sq Ft.	Total Cost per Sq. Ft.
2003	$4.15	$12.77
2004	$4.51	$14.55
% Increase from 03 to 04	8.7%	13.9%

According to the APA report, the increase in O&M cost is not due to increased utility costs, but a lack of preventive maintenance.

The Commonwealth is facing a well documented and growing challenge in managing deferred maintenance on many of its facilities. Numerous properties are in poor condition and are no longer capable of supporting their intended missions. The resources available for the maintenance and upkeep of

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[1] During April-June 2005, a staff team from the Commonwealth of Virginia, IBM, and CGI-AMS designed, developed, and executed due diligence research to gather information on 19 business functions in four business areas of the Commonwealth's Enterprise Business Architecture: administrative management, financial management, human resources management, and supply chain management, with the supporting function of application management. The team conducted a set of foundation interviews with key subject matter experts, administered electronic surveys to a sample of 46 agencies, and conducted a series of follow-up discussions with respondents. The team also used data generated by Commonwealth systems and research entities to validate survey information provided.

Commonwealth facilities are constrained. There is a clear need for a process to prioritize the available funds for maintenance, both within and across agencies.

5.1.2.1 Process Environment

Data about facilities is fractured, incomplete, and difficult to gather and consolidate.

We observed the following conditions during our Due Diligence effort related to Facilities Management. We have also drawn upon other publicly available materials to support our observations.

- **General process flows.** With the exception of the Capital Outlay process, most agencies have organically developed applications to manage and track information about their facilities. Alternatively, the Capital Outlay process is well understood and universally applied. Please see Appendix B for illustrations of the decomposition of the Facilities Management business functions.

- **Variances, blockages, and fragmentations.** Data about the utilization and physical condition of state-owned properties is highly fragmented and difficult to assemble. Agencies are resorting to special projects to physically validate and inspect their facilities to establish a trustworthy baseline.

- **Points of process intersection, integration, and conflict.** Responsibilities for managing facilities and policy oversight are distributed among multiple agencies. Each has developed their own mission-specific processes and data repositories.

- **Controls and points of redundancies.** Today, there are several points of control in the management of facilities. Construction, acquisition, and capital improvements are subject to the Commonwealth's Capital Outlay process. Likewise, the enforcement of the state's building code is centralized. Improvements, operations, and maintenance are diffused throughout the commonwealth's agencies. Their costs are buried within agency budgets and are not easily obtainable.

- **Duplication of effort and data.** Facilities data is duplicated across a variety of agency financial and administrative systems and processes. These include FAACS, various agencies' financial systems, and processes such as risk management. We found several examples of agencies addressing their need for trusted facilities data by implementing department databases, spreadsheets, or dedicated "project offices."

- **System instances and interfaces.** We learned of many local databases and spreadsheets implemented to track facilities-related data. These are in addition to some of the major agency-level systems discussed above. In some cases, these systems were integrated with, or had an interface into, the agency's financial management system. However, most are standalone solutions that respond to specific agency needs.

  In particular, only 37 of the 85 agencies have a maintenance tracking system. Within those agencies 10 different vendors and 17 different products are being used. These 37 agencies also reported the lack of certain notable capabilities, as shown in Exhibit 5-2.

Exhibit 5-2   Agencies with Maintenance Tracking Lack Basic Metrics

Function	% Lacking Current Capability
Create work orders	56
Track maintenance performed	47
Track maintenance not performed	38
Estimate costs of maintenance activities	81
Predict maintenance activities and cost in future years:	85

The Commonwealth does not have the data or common application software that would support the job cost accounting required to determine budget requirements. Nor are metrics available to ascertain the performance and quality of services provided.

There are no standard processes for managing facilities maintenance and operations.

- **Process orientation.** The Capital Outlay process prescribes a detailed, disciplined set of activities and milestones for managing the facilities construction process. This process is highly centralized and well understood. However, there are no standard processes for managing facilities maintenance and operations.

- **In-sourcing, outsourcing, and co-Sourcing arrangements.** Outsourcing does not play a significant role in facilities management within the Commonwealth. The Department of General Services (DGS) is responsible for the maintenance of Commonwealth-owned facilities within the Seat of Government. Work in many trades is contracted out under the control and oversight of the DGS. The Commonwealth typically arranges for landlords of leased properties to provide maintenance and housekeeping services to Commonwealth tenants. Appendix E, page 72 of the APA Interim Report (December 2004) provides statistics that describe the state of facilities management in the Commonwealth today, based on a summary of survey results.

Of all 85 agencies, the following statistics shown in Exhibit 5-3 reflect today's environment:

Exhibit 5-3   Agencies Overall Need to Improve Preventive Maintenance

Function	% Lacking Current Capability
Track deferred maintenance	35
Schedule preventive maintenance for their buildings	42
Perform Facility Condition Assessments on their buildings	42

These data indicate that preventive maintenance is not being performed. Lack of preventative maintenance decreases the expected life of buildings and equipment. Additionally, lack of preventative maintenance increases the level of demand for call-in maintenance due to increased level of facility and building system failure. This lack of preventive maintenance also increases the Commonwealth's risk and liability.

The low number of agencies performing facility condition assessments supports the APA audit finding that the Commonwealth does not have good data on the present condition of its buildings. Although the Commonwealth has contracted

with a vendor to provide software to track building conditions, historic data has not been loaded into the system and current data collection is not complete.

Today, facilities data can be found in numerous stand-alone, isolated systems.

Today's facility data environment within the Commonwealth, as noted by the Auditor, is illustrated in Exhibit 5-4 below.

Exhibit 5-4   Current Facilities Management Environment
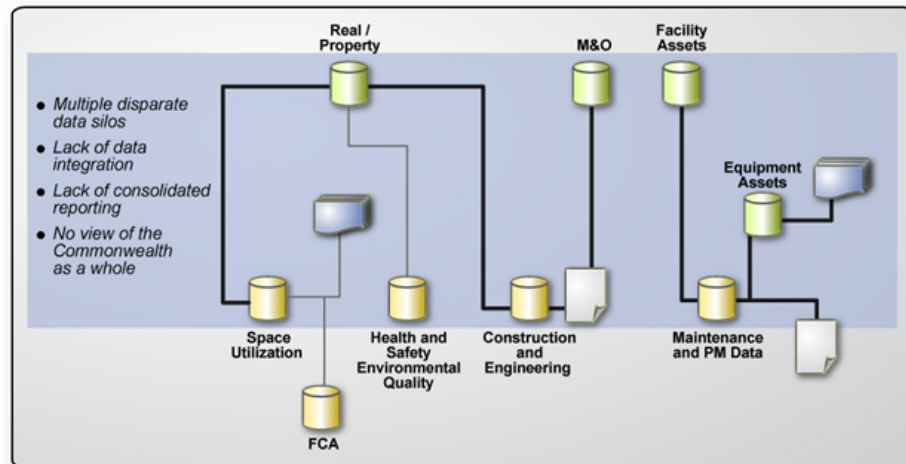
- **Legal considerations.** In addition to the process environment described above, there are a number of legal considerations that affect the administrative business processes:

  - The Department of General Services (DGS) is the intra-governmental service agency that provides administrative services to state agencies and institutions of higher education, as well as and to many local governments, boards, and authorities; and that DGS may establish rules and regulations necessary or incidental to the performance of its duties or execution of its powers.

  - The Design-Build/Construction Management Review Board shall review and approve requests by public bodies other than the Commonwealth (i.e., local governing bodies, school boards, and authorities) to enter into design-build or construction management contracts. The Board is required to adopt regulations for a two-step competitive negotiation process to be applied to design-build and construction management projects undertaken by these public bodies.

  - The Division of Engineering and Buildings provides staff support to the Board.

  - The Division may develop, in cooperation with state institutions and agencies concerned, maintenance and utilization standards for state buildings, and provide functional direction and service to institutions and agencies of the state government with respect to their policies, practices, and administration of buildings and grounds.

  - Purchasing and disposal of equipment is subject to the requirements of the Virginia Public Procurement Act.

The legal and policy framework accommodates change.

5.1.2.2 Strengths and Weaknesses Review

We observed the following strengths of the Commonwealth's current approach to Facilities Management during Due Diligence:

- Agencies are generally satisfied with the quality of services and maintenance they receive from either DGS or their landlord.

- The Commonwealth is implementing processes and organizational changes to improve the control of acquisition and utilization of leased space.

- Large agencies have property management systems in place and are experimenting with new technologies to improve the efficiency of maintenance.

We observed the following weaknesses of the Commonwealth's current approach to Facilities Management during Due Diligence. Some of these comments also reference other publicly available sources of information such as APA audit reports.

- The documentation requirements associated with the Capital Outlay process are perceived as cumbersome and often produce conflicting or duplicate documentation requirements.

- There is no single authoritative source that identifies and describes state-owned facilities and installed equipment. Each system is agency-specific with regard to data, reporting, or administration. This also includes facility-installed equipment that supports the infrastructure of assets. There is duplicative and probably inaccurate information in numerous systems.

- The APA audit documented approximately $1B in deferred maintenance expenses. There no accountability for the condition of buildings and how agencies maintain them. The Commonwealth is facing growing long-term liability and risk.

- The APA audit points out that the Commonwealth does not require agencies that operate facilities to have a master plan for facilities management.

- Agencies negotiate their own leases and manage properties independently, resulting in inefficient space usage and inconsistent contract management.

5.1.3 Reengineering and Re-Solutioning Opportunities

Team CGI-AMS envisions working with the Commonwealth to implement a new approach to managing facilities. Our proposed approach, Total Asset Management, is composed of several components:

- Lifecycle planning for facilities
- Preventive maintenance management
- Delivery order contracting
- Warranty tracking
- A shared enterprise-wide system for managing facilities construction, maintenance, and operations

- We are proposing an approach to facilities management that focuses on managing the total cost of ownership.

We can help the Commonwealth achieve the best of both worlds: achieving the ability to consolidate and analyze facilities decisions across the enterprise while preserving a decentralized approach to agency management.

5.1.3.1 Process Recommendation

The solution we propose to the Commonwealth takes a holistic view and manages the interrelationships among all assets—facilities, space, inventory and equipment—with respect to maintenance and operations, leasing, capital planning and construction, and financial management. Total Asset Management is all about taking care of physical assets in every respect in order to:

Total Asset Management is all about taking care of physical assets in every respect

- Maximize asset utilization
- Maximize asset availability
- Minimize total cost of ownership
- Maximize asset effectiveness

5.1.3.1.1 Lifecycle Planning for Facilities

Physical assets such as land, buildings, and installed equipment can be tracked according to lifecycle characteristics to be defined by the Commonwealth. Exhibit 5-5 below illustrates this concept by showing the various stages in the lifecycle of a physical facility. The exhibit also depicts the functions that impact a centralized facilities management information system and the data tools that are applicable to various stages of the life cycle (from basic tools such as MS Project to Facility Condition Assessment data). As described in Section 5.1.3.2 below, using a Total Asset Management system, the Commonwealth can gain a clear picture of the state of its facility and equipment assets and monitor their lifecycle needs. This will provide the Commonwealth with greatly improved data for budgeting and capital outlay planning.

Exhibit 5-5   Lifecycle Management Stages

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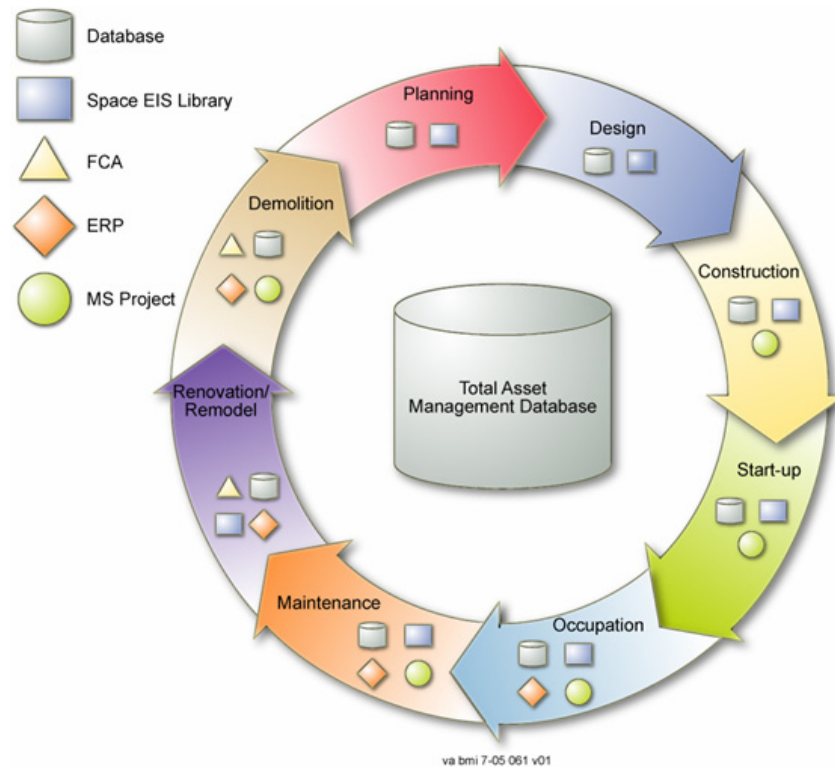
5.1.3.1.2 Preventive Maintenance Management

A comprehensive Preventive Maintenance (PM) program can be established within the Commonwealth agencies to automate scheduling of PM tasks for equipment and buildings. A comprehensive collection of industry-standard maintenance procedure data, easily customizable, will help users set up PM schedules based on criteria agreed to across the agencies. Additionally, DGS can establish goals and metrics for PM accomplishment.

5.1.3.1.3 Delivery Order Contracting

We can help the Commonwealth achieve a better return on its construction investment.

Delivery Order Contracting (DOC), also known as Job Order Contracting, streamlines the construction acquisition process. DOC is a Total Asset Management tool for procuring construction services that has been used successfully both in the private sector and the federal government. Virginia Commonwealth University is the first public institution of higher education in Virginia to be permitted by the Department of General Services to employ DOC for renovations and repairs to its physical plant. Under the DOC methodology, VCU and their contracted general contractor agree to a lump sum, fixed price after the scope of work has been finalized. The general contractor then solicits prices from the most qualified subcontractors in the area.

The DOC methodology has been successful as a tool to provide a cost-effective, efficient, and quality contracting method that overcomes the often contentious environment often experienced with typical "low bid" contracts.

In addition, the resulting performance-based contract provides an incentive for the contractor to deliver quality work, on time, and in a responsive fashion. DOC is a "team" approach to construction that reduces acquisition costs and time and improves response and quality.

As illustrated in Exhibit 5-6 below, DOC significantly reduces the acquisition time and the overhead costs associated with contract acquisition such as design advertising and document publication. Additionally, a study done at a large metropolitan school district showed a savings of more than $1.8 million dollars in overhead design and publication costs over a five year period involving more than $35 million of construction. This five percent savings in overhead cost transferred directly into "hard" construction.

Exhibit 5-6   Savings Achieved through DOC
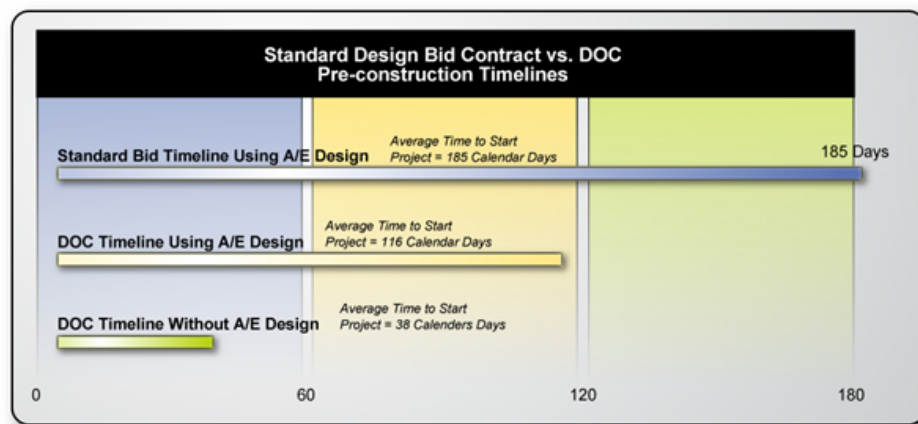
DOC offers the following advantages compared to traditional contracting methods:

- **Reduced backlog.** DOC provides an excellent way to reduce maintenance, repair, and renovation backlog.
- **Better cost data**. DOC lets you know the cost before committing funds.
- **Reduced start-up costs.** DOC reduces up-front costs and increases available dollars for construction.
- **Improved owner/contractor relations.** DOC can produce a win-win contract relationship.

5.1.3.1.4 Warranty Tracking

The Commonwealth does not have a comprehensive method for identifying and enforcing warranty claims against vendors or contractors. Therefore, the Commonwealth is likely paying for repairs that could be recouped from its suppliers. This is particularly important in the early years of service in a facility's lifecycle. It is also important when major renovations or repairs are undertaken. With Total Asset Management, all warranty data for Commonwealth buildings, systems, and assets would be housed in a common enterprise level facilities management system, described in Section 5.1.3.2 below. Work requests can be

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compared to available warranty data to help reduce the Commonwealth's expenditures.

5.1.3.2 System Approach

Total Asset Management is predicated on the availability of an enterprise-wide facilities management system. We propose that the Commonwealth implement a common solution for facilities management spanning all agencies. Exhibit 5-7 below provides an overview of our envisioned enterprise facilities management solution.

Exhibit 5-7   Enterprise Facilities Management Architecture
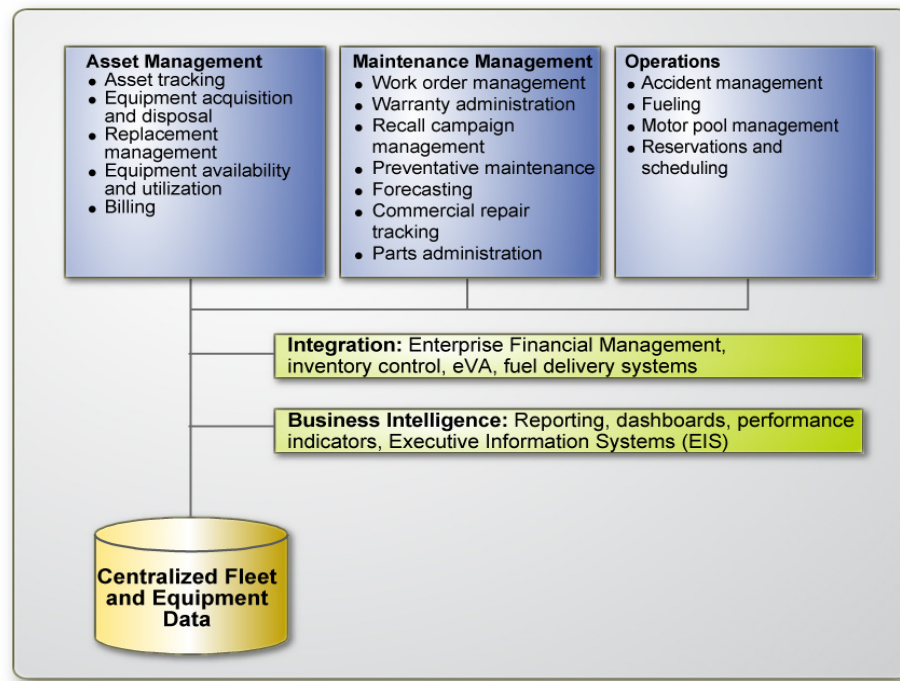
VA BMI 7-05 064 v02

Our proposed solution to enterprise-wide facilities management is composed of the following elements:

- **Master planning.** Master planning provides the core capabilities for managing properties, space utilization, lease management, and replacement planning. It also provides support for mapping facilities costs to grants.

- **Construction project management.** Construction project management provides a common process and tools for managing construction, improvements, and renovations. Construction project management also provides support for managing and tracking inspections and building code compliance.

- **Operations and maintenance.** Operations and maintenance encompasses both preventive maintenance management and repairs. It provides capabilities for managing maintenance schedules, work orders, and contractors.

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- **Asset management.** Asset management provides the tools required to maintain an accurate inventory of facilities, installed systems, and other associated equipment.
- **Utility management.** Utility management provides the data and functions required to monitor, track, and analyze energy consumption throughout the Commonwealth's facilities.

5.1.3.3 Organizational Approach or Service Delivery Model

Total Asset Management and its enabling enterprise-level facilities management system will impact existing organizations, roles, and responsibilities. We suggest the following implementation approach:

- **Facilities management policies and processes.** the Department of General Services is currently responsible for establishing policies related to facilities. We believe that DGS should continue to perform this function.
- **Functional responsibility for facilities.** Those managing the mission of each agency are in the best position to make facilities decisions. Therefore, we do not recommend that the operational management of facilities be consolidated. Instead, the responsibility for determining requirements, budgeting priorities, and so on, should remain decentralized.
- **System implementation.** We recommend that a single enterprise facilities management system be implemented under the guidance of the Department of General Services. Each agency will be able to preserve its autonomy within the system, in keeping with the Commonwealth's decentralized management framework. However, the Commonwealth will have the capability to quickly monitor, analyze, and consolidate information about the status of its facilities and their operations.

5.1.4 Benefits to the Commonwealth

We can help the Commonwealth realize hard-dollar savings in its facilities operations and maintenance costs.

Based upon our experience working with similar state governments, we believe that the Commonwealth experiences the kinds of costs outlined in Exhibit 5-8 below. Today, these costs are diffused throughout agency budgets and are not easy to isolate or document. Our proposed Total Asset Management approach will make these costs visible and measurable. We also believe that Total Asset Management will enable the Commonwealth to achieve real dollar cost savings in these areas. Exhibit 5-8 also outlines the benefits to be achieved by implementing Total Asset Management. These estimates are based upon Team CGI-AMS's experience in working with other public sector clients of size and complexity comparable to the Commonwealth.

Exhibit 5-8   Areas of Hidden Costs and Estimated Savings

Cost Categories	Range of Projected Cost Savings (%)
Labor	2 – 7
Materials	5 – 10
Equipment Downtime	5 – 15
Overall Operations and Maintenance	3 – 11
Total Cost of Ownership	8 – 15

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The example provided in Exhibit 5-9 below is based upon Team CGI-AMS'S experience of implementing Total Asset Management at The American University. Small savings such as 3.5 percent reduction in utility costs, 10 percent reduction in capital renewal costs by extending equipment life and a significant decrease (20 percent) in deferred maintenance combine to yield significant savings in the total cost of ownership (TCO) of approximately 12 percent.

The Commonwealth's operations and maintenance costs have risen by 8.9 percent and total cost of ownership has risen by 13.9 percent between 2003 and 2004. This increase is due in part to poor property data, maintenance management practices, and tracking of costs. In addition to increased costs, this situation presents an increased risk and liability to the Commonwealth.

Implementing a Total Asset Management approach would resolve the issues of poor property data, maintenance backlogs, and lack of cost tracking. A 12 percent reduction in total costs per square foot would result in on-going cost savings for the Commonwealth of more than $115 million per year. Based on Team CGI-AMS'S experience with similar public sector clients, this level of savings is achievable. Even a conservative reduction of 5 percent would save the Commonwealth over $50 million per year.

Exhibit 5-9   Benefits of Total Asset Management

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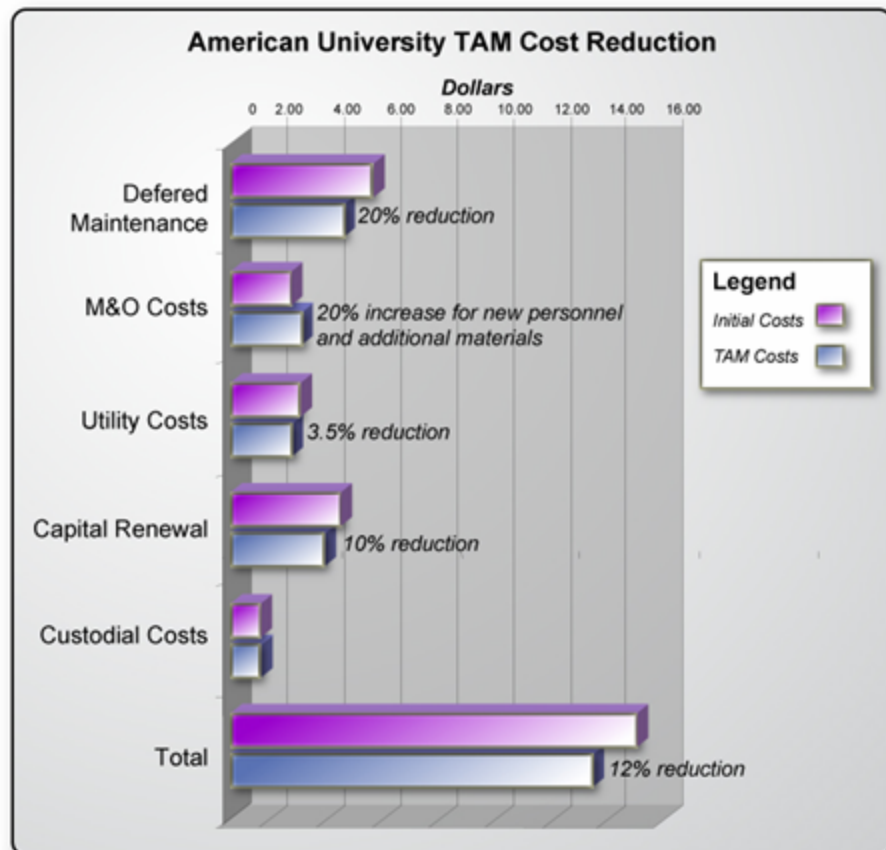
5.1.5 Transition or Implementation Path

We propose to implement our facilities management solution in three stages, outlined below.

Stage I consists of the following tasks:

- Complete a detailed requirements analysis and functional assessment based upon the needs of DGS
- Implement a baseline facilities management system that consolidates inventory tracking and asset management functions.

Stage II consists of the following tasks:

- Enhance the baseline system to encompass the functional requirements of major agencies such as VDOT, State Police, Corrections and DMHRHRSAS. Implement additional functionality for managing maintenance, repairs, and energy conservation.
- Implement capital outlay management and construction management processes.

Stage III will consist of bringing agencies online as required.

We know of no current initiatives that would be impacted by proceeding with these recommendations. We believe that our recommendations are, in fact, key enablers of the Commonwealth's broader goals for facilities management.

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5.2 Fleet and Equipment Management

The Issue	The Solution	The Benefit
Virginia is not able to quantify its fleet and equipment. The Commonwealth cannot accurately determine its total costs for fleet and equipment management. There is no central repository of information for vehicle and equipment resources.	Implementation of a total fleet management approach to managing vehicles and equipment.	Cost savings in maintenance and operations. Clear identification of fleet related assets with ability for all agencies to easily produce fleet related reports. Clear identification of fleet related costs by vehicle, vehicle class, and agency. Easily produced Commonwealth-wide fleet summary reports.

Fleet and equipment management functions encompass the activities required to track, maintain, and account for the vehicles, tools, systems, and other types of equipment required by each agency to perform its mission. Responsibilities for these functions are diffused throughout the Commonwealth. Similarly, the costs associated with both fleet and equipment management are buried within agency budgets. Therefore, they are difficult to gather and analyze.

The Department of General Services and The Department of Transportation (VDOT) dominate this domain. DGS is responsible for administering the Commonwealth's fleet of passenger vehicles. VDOT also manages thousands of equipment and vehicles. Additional agencies, such as Corrections, have significant, albeit smaller fleets of vehicles and equipment for which they are responsible.

The Commonwealth's Enterprise Business Architecture treats fleet and equipment management as two separate domains, each having its own functional requirements and needs. However, our Due Diligence effort suggests that these functions have much in common. Therefore, we have elected to address Fleet and Equipment Management as a single logical process, rather than to continue maintaining a distinction between the two processes.

The remainder of this section outlines our proposal for an enterprise-level solution to managing both the Commonwealth's fleet and equipment assets.

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5.2.1 As-Is Cost of Doing Business

Please see Appendix A for our calculation of the As-Is cost of doing business for Fleet and Equipment Management. Other financial impacts of the As-Is state are discussed below.

We believe that the Commonwealth is underestimating the size, complexity, and expense of its vehicle fleet and equipment inventory.

The Commonwealth's definition of "fleet" is largely limited to passenger vehicles. The remainder of the Commonwealth's inventory of rolling stock is typically considered to be "equipment." This category also includes non-mobile equipment such as welding machines, snow plows, and sand spreaders. Historically, the Commonwealth has treated these two categories of assets as functionally different, requiring separate management processes and systems. We believe these two groups of assets are, in fact, much more similar than the Commonwealth has treated them. Therefore, we believe that the Commonwealth is foregoing economies of scale and opportunities for improvement from which it could benefit if the management of fleet and equipment were consolidated. Exhibit 5-10   Comparison of Fleet Sizes below provides our estimate of the size and scope of this combined inventory and the associated expenses.

Exhibit 5-10   Comparison of Fleet Sizes

Metric	Commonwealth's Definition of Fleet	Combining Fleet and Equipment
Size of fleet	>20 K	50-60 K
Average cost per asset	$23.4 K	$35-40 K
Fleet purchase cost	$468 M	$1.8-2.4 B
Annual cost to maintain	$12-13.3 M	$110-198 M

The APA audit provides the following summary of fleet acquisition, operations and maintenance expenses, shown in Exhibit 5-11 below.

Exhibit 5-11   Summary of Fleet Acquisition and Operating Costs

Expense	2001	2002	2003
Vehicle Purchases	$68,743,374	$52,116,862	$42,505,089
Maintenance	12,034,530	12,598,575	13,338,429
Gasoline	23,529,506	23,717,349	22,938,109
Personal Reimbursement	14,326,768	14,494,411	11,953,603
Total	$118,634,178	$102,927,197	$90,735,230

Maintenance costs are likely growing faster than the Commonwealth's own analysis suggests.

Exhibit 5-11 demonstrates that the Commonwealth's maintenance expenses are slowly increasing while other expenses are decreasing. We believe that these numbers hide the real picture. A comparison of maintenance costs to annual depreciation, rather than the total annual budget would likely reveal a more alarming trend in operational costs.

We also noted that the Commonwealth substantially relies on the discretion of its employees to determine when and how vehicles are to be repaired. There are numerous situations where an employee may take a state-owned vehicle to a local garage for repairs at commercial rates. Most agencies do not have a process to authorize, pre-approve, or control these costs before they are incurred.

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Reducing the use of personal vehicles for state business will yield savings.

Reimbursement for use of personally owned vehicles by Commonwealth employees is an issue for the Commonwealth. Exhibit 5-11 points out that the Commonwealth spends between $11-14.5 Million per year to reimburse employees for POV usage. Given that the annual cost of owning and operating a mid-size sedan (including fuel) is $3,731 (from a recent study we conducted for another state of comparable size to the Commonwealth of Virginia), the approximately $11.9 Million spent in 2003 would fund almost 3,200 additional Commonwealth owned mid-size sedans. This suggests that the Commonwealth can achieve additional cost savings by converting this POV mileage to state-owned vehicles, substantially greater than the $291,000 per year opportunity identified by the Joint Legislative Audit and Review Commission (JLARC).[2] These are surprisingly high numbers and deserve a more in-depth analysis.

5.2.2 Commonwealth Process Environment and Architecture

5.2.2.1 Process Environment

- **General process flows and/or decompositions, including starting and ending points.** Please see Appendix B for illustrations of the decomposition of the Fleet and Equipment Management business functions.

- **Process orientation (centralized, distributed, combination, etc).** DGS and VDOT have the largest responsibilities for managing fleet and equipment assets within the Commonwealth. Recently, the Commonwealth centralized the management of passenger vehicles within DGS. DGS in turn provides vehicles to customer agencies on both a long-term and short-term basis. VDOT is charged with managing its own inventory of vehicles and construction equipment, separate from DGS. There are other agencies with smaller, yet substantial responsibilities such as the State Police, Corrections, and DNR. Each agency uses separate processes and systems for managing these assets. The only common denominator is the requirement to provide data to FAACS, the Commonwealth's system of record for fixed assets.

An artificial distinction between fleet and equipment management has resulted in the Commonwealth investing in multiple, redundant applications.

- **System instances and interfaces.** DGS provides a centralized vehicle reservation system and will begin implementing a fleet management system specific to its needs in the near future. VDOT utilizes a variety of applications and databases to manage its vehicles and equipment. Likewise, the State Police have their own system for tracking and managing vehicles. Other agencies also have their own automated or manual systems for vehicle and equipment management. This disjunction makes gathering a complete, timely picture of the Commonwealth's fleet and equipment nearly impossible.

- **Variances, blockages, fragmentations.** Inventory and expense data for vehicles and equipment is scattered across several systems. In some cases, these systems are obsolete and are no longer capable of meeting agency mission requirements. Therefore, gathering a complete, timely understanding of the Commonwealth's assets is very difficult.

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[2] JLARC Review, Summary of Findings, p. 22.

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The Commonwealth needs an enterprise-level fleet and equipment management solution in order to better account for its assets, identify and track costs.

- **Points of process intersection, integration, and conflict.** There is little integration and virtually no sharing of data about fleet and equipment assets among agencies. The one exception is DGS's centralized vehicle reservation system.

- **Controls and points of redundancies.** A variety of processes and systems have evolved over time to meet the needs of individual agencies or departments. As noted previously, agency processes range from very sophisticated (DGS and VDOT) to manual or informal processes utilized in smaller organizations.

- **In-sourcing, out-sourcing, co-sourcing arrangements.** With the exception of VDOT, the Commonwealth does not have any formal outsourcing arrangements for managing fleet and equipment. Repair work is commonly performed by local merchants, local governments, and agencies with internal repair capabilities.

- **Legal considerations.** Sections 2.2-1173 through 2.2-1181 of the Code of Virginia set forth the responsibilities of the Director of the Department of General Services (Director) to establish an appropriate administrative unit within General Services to manage the Centralized Fleet.

  Governor Warner issued *Executive Order 20* in 2002 that provided agencies with state-owned passenger-type vehicles.

  Federal funding associated with VDOT, State Police, and other selected agencies, requires that charge-back rates must be compliant with the Federal Office of Management and Budget Circular A-87, "Cost Principles for State, Local, and Indian Tribal Governments."

  Purchasing and disposal of equipment is subject to the requirements of the Virginia Public Procurement Act.

5.2.3 Strengths and Weaknesses

We identified the following characteristics of the Commonwealth's fleet and equipment management processes. These characteristics are summarized in Exhibit 5-12 below. The Comments column in the following exhibits represents Commonwealth quotes from the Fleet and Equipment Management surveys, quotes from Commonwealth-issued reports or our own observations.

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Exhibit 5-12   Current Environment Strengths

Strengths	Recommendations and Comments
Appropriate use of state-owned vehicles	The JLARC study found that the policies in the Code of Virginia, executive orders, and fleet management regulations are appropriate.
Centralized procurement and management	Ownership of passenger vehicles is mostly centralized under DGS.
Agency satisfaction with fleet availability	Agency employees are generally satisfied with the amount, types, and quality of fleet vehicles.
Maintenance control center	DGS is implementing a maintenance control center to manage preventive and unscheduled repairs for its fleet.

The Due Diligence review and the Commonwealth's own audits reveal numerous weaknesses in the current fleet and equipment management processes (all observations are from our Due Diligence findings unless otherwise noted). These weaknesses are listed in Exhibit 5-13 below.

Exhibit 5-13   Current Environment Weaknesses

Weaknesses	Recommendations and Comments
Fleet and equipment management in the Commonwealth is highly decentralized and is the responsibility of each individual agency.	"We found that most agencies do not have policies and procedures for properly maintaining agency-owned vehicles nor evidence of proper maintenance being completed through documented maintenance records…[3]
Fleet and equipment costs are not accurately captured or allocated. Most agencies (60%) track maintenance history on each vehicle manually.	"…We found that agencies do not track maintenance costs by vehicle. This prohibits an agency from analyzing maintenance costs and determining if maintaining the vehicles is no longer cost-beneficial. In addition, agencies do not keep maintenance logs to ensure proper maintenance of vehicles."[4]
The Commonwealth is not capturing needed fleet information.	The majority of agencies (63% of surveyed agencies) do not have automated fleet or equipment management systems. Of the few agencies scheduling equipment usage, only 17% utilize an automated process to reserve and schedule equipment use indicating more equipment than necessary is held to meet operational requirements.
There is no coordinated approach to maintenance and repair of the fleet.	Many agencies (42% of surveyed agencies) do not monitor, track, or schedule equipment repair or maintenance and report time against it.

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[3] JLARC Review, Summary of Findings, p.21.

[4] JLARC Review, Summary of Findings, p.21.

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Weaknesses	Recommendations and Comments
Key Performance Indicators are not used to monitor fleet performance.	Approximately 78% of agencies surveyed do not have key performance indicators (KPIs) for Fleet Management, hindering the ability to monitor and manage performance.
A lifecycle management approach is not used to manage fleet replacement.	Most agencies (70% of surveyed agencies) do not have a fleet lifecycle approach to vehicle replacement planning within their organization. Further, there is no centralized or coordinated vehicle and equipment replacement program based on economically derived lifecycle characteristics of the various classes of vehicles and equipment.
Personal mileage reimbursements are not tracked.	This deficiency makes feasibility studies impossible. In a recent study of a comparable state, we were able to show that state how to save over $1.3M per year in recurring costs. Indeed, the JLARC report identified recurring annual savings of as much as $291,000 in FY03.[5]
Many employees do not reimburse the Commonwealth for commuting fees.	The Commonwealth needs to charge employees an appropriate fee, based on the length of the commute, for commuting in a Commonwealth-owned vehicle.
The purchasing approval process is insufficient.	Reviews are not thorough concerning purchase requests, and nearly all requests are approved.
There is no systematic way to be able to react to manufacturer recalls.	When recalls occur, a means to schedule and track completion would be beneficial.
The data for repair/replace analysis is incomplete or unavailable.	Data is not captured in order to support repair/replace analysis.
There is a need for an enterprise- wide labor/parts numbering system to identify repair and maintenance activities.	The use of standardized codes for the reporting of repair activities will improve data collection and will provide the ability to analyze data for the purpose of reducing vehicle downtime and maintenance related costs. VDOT Equipment (Fleet) Management plans to implement the use of the American Trucking Association's Vehicle Maintenance Reporting Standards (VMRS) coding convention.
State Police vehicles are maintained by the trooper to whom they are assigned.	Almost half of the agencies do not have an approval process for fleet maintenance work. Most agencies (93% of surveyed agencies) do not have a fleet-specific work order planning function.

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[5] JLARC Review, Summary of Findings, p.22.

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Weaknesses	Recommendations and Comments
Agencies have commented on the difficulty of vehicle disposal and surplus.	Net return from sale of salvaged vehicles can be improved through more frequent sales run by professional vehicle auction firms. Vehicles depreciate daily and bring higher returns at auctions held in geographical locations selected on the basis of net opportunity.
The Commonwealth is not consistently recording and tracking warranty information.	Approximately 76% of responding agencies track equipment warranty with 39% of these tracking it manually. With such a high number of agencies not tracking warranty and a large number tracking it manually the effectiveness of the Commonwealth's warranty management is questionable. Effective warranty management is a key indicator of total cost of ownership management.

5.2.4 Reengineering and Re-Solutioning Opportunities

The Commonwealth needs to reengineer its fleet and equipment management processes and implement a new enterprise-level solution for managing these assets

We believe that the Commonwealth can reduce its overall costs for maintaining, operating, and replacing its equipment and vehicle assets. Our recommendations are divided into two areas: opportunities to modernize processes and our system solution recommendations. We propose the following initiatives:

- **Process modernization**
    - Implement a common policy, process, and data standards for managing both fleet and equipment assets enterprise wide
    - Implement a process for managing maintenance, both internally and externally performed
    - Implement warranty administration
    - Implement a service bureau to assist agencies in managing vendors and external repair service providers.

- **System modernization.** Implement a Commonwealth-wide system that supports a standard business process of vehicle and fleet management but maintains agency decision-making autonomy.

5.2.4.1 Process Recommendation

5.2.4.1.1 Standard Process and Data Conventions for Equipment and Fleet Management

The distinction between fleet and equipment management processes contributes to complexity and obscuring costs, and has led to the proliferation of applications among agencies. We strongly recommend that a common set of processes and policies be developed as a standard for use by all agencies. Data standards should also be defined as part of this effort. Such standards are required to facilitate consolidation of data from multiple agencies.

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5.2.4.1.2 Maintenance Management Process

DGS is implementing a process for authorizing maintenance and repairs for its passenger fleet. VDOT is also working with a similar model in one of its divisions. We believe that this approach should be expanded to encompass as many classes of vehicles and equipment as reasonably possible, including categories such as heavy trucks, school buses, and construction equipment. This process should also be used to assess and monitor the quality of services received from both internal and external repair organizations.

5.2.4.1.3 Warranty Administration

The Commonwealth does not have any current processes for proactively tracking and recovering costs against manufacturers' warranties. Therefore, the Commonwealth is likely paying for repair costs that could be recovered from suppliers. We propose to implement a warranty administration process.

5.2.4.1.4 Fleet and Equipment Service Bureau

We estimate that the Commonwealth is involved in approximately 275,000 maintenance or repair occurrences for its fleet and equipment assets. The responsibility for managing these events and the expertise in dealing with vendors, manufacturers and repair organizations is scattered throughout the Commonwealth. Operational (not financial) management of these assets is often a collateral duty. Therefore, it is likely that the Commonwealth is not receiving the level of service or pricing performance it could from its suppliers and service providers. We propose to implement a Service Bureau to manage the "back office" functions associated with fleet and equipment management:

- Approval of repairs and maintenance actions
- Negotiation of favorable services pricing
- Auditing of invoicing and billing
- Quality assurance and compliance with maintenance authorizations and policies
- Cost analysis and tracking
- Expert vendor and original equipment manufacturer relationship management

5.2.4.2 System Recommendation

We are proposing an enterprise-level solution for Fleet and Equipment Management that meets the needs of multiple agencies.

Our process recommendations are predicated upon implementing an enterprise-wide application for managing fleet and equipment assets. We propose the architecture depicted in Exhibit 5-14 below as the foundation for our solution.

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Exhibit 5-14   Enterprise Fleet and Equipment Management Architecture

Asset Management	Maintenance Management	Operations
Asset Tracking	Work Order Management	Accident Management
Equipment Acquisition and Disposal	Warranty Administration	Fueling
Replacement Management	Recall Campaign Management	Motor Pool Management
Equipment Availability & Utilization	Preventative Maintenance	Reservations and Scheduling
Billing	Forecasting	
	Commercial Repair Tracking	
	Parts Administration	

Integration – Enterprise Financial Management, Inventory Control, eVA, Fuel Delivery Systems

Business Intelligence – Reporting, Dashboards, Performance Indicators, Executive Information System (EIS)

Centralized Fleet & Equipment Data

Our proposed solution to enterprise-wide fleet and equipment management is composed of the following elements:

- **Asset management.** Asset Management provides the core capabilities required to accurately track and account for the Commonwealth's inventory of fleet and equipment assets. It also provides facilities for lifecycle planning, acquisition, and disposal; monitoring of asset utilization; and billing.

- **Maintenance management center.** Maintenance Management provides tools for tracking maintenance actions, histories, and expenses. In addition, Maintenance Management provides tools for managing preventive maintenance and work performed by external service providers. Maintenance Management also provides tools for warranty tracking and managing reimbursements.

- **Operations management.** Operations Management provides the tools required to administer and manage motor or equipment pool operations. Functions include scheduling and reservations, accident management, and fuel consumption management. This function also manages in-house and OEM-performed warranty work.

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We are offering the best of both worlds: a centralized, integrated system while preserving the autonomy of agencies to manage their missions.

5.2.4.3 Organizational Approach or Service Delivery Model

Our recommended process and system initiatives will impact existing organizations, roles, and responsibilities. We suggest the following implementation approach:

- **Fleet and equipment management policies and processes.** Unless otherwise mandated by regulation or executive order, The Department of General Services should take the lead in establishing a standard process, policies, and data conventions for fleet and equipment management. These standards should be developed in cooperation with the Department of Transportation to make sure that a single set of guidelines is implemented for all agencies.

- **Functional responsibility for fleet and equipment management.** The vast majority of the Commonwealth's fleet and equipment assets are managed by DGS or VDOT today. Unless provided for in regulations or executive orders, the management of fleet assets should be consolidated into DGS. Non-vehicle equipment classes can be decided upon on a case-by-case basis.

- **Fleet and equipment management service bureau**. We recommend that this function be administered by Team CGI-AMS in cooperation with the Commonwealth. Team CGI-AMS can provide the specialized expertise required to administer our proposed processes. The Commonwealth can direct its expertise and resources to better managing how fleet and equipment assets are utilized to support agency missions.

- **System implementation.** We recommend that a single enterprise Fleet and Equipment management system be implemented under the guidance of the Department of General Services. Each agency will be able to preserve it's autonomy within the system, in keeping with the Commonwealth's decentralized management framework. However, the Commonwealth will have the capability to quickly monitor, analyze, and consolidate information about the status of its facilities and their operations.

5.2.4.4 Benefits to the Commonwealth of Virginia

When implemented, we believe that our process and system recommendations will provide the Commonwealth with the benefits described in Exhibit 5-15 below.

Exhibit 5-15   Expected Benefits

Cost Categories	Projected Cost Savings (%)
Maintenance	12
Parts	10
Labor	15
Fuel	3
Tires	5
Overall Cost Savings	10-15%

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Our estimate of cost savings is based upon our experience of working with state governments comparable in size to the Commonwealth. One particular client had estimated their annual fleet costs to be approximately $37 million. Team CGI-AMS helped the client realize that their real costs were in the magnitude of $120 million per year. The client achieved a 20 percent reduction in operating costs by implementing recommendations similar to those we propose for the Commonwealth.

5.2.4.5 Transition or Implementation Plan

Team CGI-AMS has the right combination of fleet management, financial management, and specific government experience to implement the Commonwealth's Fleet and Equipment Management solution.

Team CGI-AMS has more than 30 years of experience implementing administrative systems in the public sector. Our partner, MAXIMUS, is the leading provider of fleet management solutions and consulting services in the public sector. Exhibit 5-16 below summarizes our proposed approach to implementing our recommended solutions for fleet and equipment management. All of the solutions are long-term solutions. However, the initial analysis and planning for each solution will occur during Phase 1. Please refer to Chapter 9 for a more complete discussion of our proposed implementation road map.

Exhibit 5-16   Fleet & Equipment Management Approach

Initiative	Phase 1	Phase 2
Definition of Enterprise-Wide Processes, Policies, and Data Conventions for Fleet and Equipment Management	Research Process Development Policy Recommendations Data Standards	Implementation and Operational Support
Maintenance Management Process	Research Process Development Policy Recommendations Data Standards	Process Implementation
Warranty Administration	Business Case Development Functional Requirements Implementation Planning	Implementation and operational Support
Enterprise Fleet and Equipment Management System	Business Case Development Functional Requirements Software Package Selection Implementation Planning	Detailed Design Implementation Integration and interfaces Data Conversion Training Infrastructure Support Deployment Operations Maintenance End-user Support

5.2.4.6 Disposition of Active or Approved Projects

The Department of General Services is undertaking a maintenance control center initiative to better manage the repairs of the Centralized Fleet. A contractor will operate this service and will be providing information to DGS from an off-the-shelf client-server based fleet management system used by the contractor. This is

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intended to fill a DGS gap in maintenance information and preventive maintenance management.

Our proposed solution is similar in concept, but broader in scope. There are two primary differences. Our proposed solution is intended to meet the needs of multiple agencies without sacrificing operational autonomy. We are also proposing an architecture that fully integrates the management of fleet and equipment assets into the enterprise and provides a broader array of services and capabilities.

We recommend that DGS consider implementing only the essential elements of their current project plan to meet immediate operational needs. Resources should be shifted to working with VDOT to lead the development of statewide processes, policies, and data standards for fleet and equipment management.

VDOT is currently upgrading their existing PeopleSoft implementation. VDOT has also implemented a variety of databases and reporting tools to achieve better control of the fleet and equipment assets under its charge. We do not have specific knowledge of VDOT's plans to address its equipment management needs within PeopleSoft. However, we believe that VDOT should delay making significant investments in detailed design or configuration of these functions within PeopleSoft until a statewide approach to fleet and equipment management can be defined. We also believe that VDOT will be better served by participating in implementing a well-designed, specialized, vertical COTS solution for fleet and equipment management rather than customizing a more generic ERP asset management system.

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5.3 Travel Management

The Issue	The Solution	The Benefit
Travel policy enforcement and reimbursement is expensive and utilizes a disproportionate level of resources.	**Implementation of an enterprise-wide Travel and Expense** **Reporting system that automates the currently manual processes of travel authorization, travel planning (reservation and booking), and reimbursement.**	**Reduces the cost of travel administration.** **Enforces Commonwealth travel policies and procedures.** **Routes travel forms to appropriate approvers and supervisors.** **Provides continuous status of travel requests and reimbursements.** **Increases compliance and conformance to travel rules and regulations.**

Travel expense administration is a tightly regulated process at the Commonwealth. State policies and procedures are designed to ensure that all travel is reasonable and necessary. Unfortunately, restrictive administrative procedures and the frequency of travel combine to create a relatively high cost for administering, enforcing and reimbursing travel expenses. As a percentage of actual expense, the administrative costs of travel reimbursements are significantly higher than that for other forms of payments and vouchers.

To reduce the overall cost of travel administration, Team CGI-AMS suggests that the Commonwealth deploy an Automated Travel System that will provide paperless routing of travel requests, assist in travel bookings and reservations, and streamline the travel reimbursement process.

State regulations are designed to ensure that all travel conforms to the business needs of the agency and the citizens of the Commonwealth. The use of Commonwealth funds to accommodate personal comfort, convenience, and preference is not permitted. A review of the agencies found that 100 percent of the responding agencies required supervisory approval prior to traveling with 73 percent of the agencies maintaining supplemental and restrictive travel policies.

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These restrictive policies include procedures on out-of-state travel, reimbursement procedures, meal allowances, auditing procedures, and non-compliance procedures.

5.3.1 As-Is Cost of Doing Business

Please see Appendix A for our calculation of the As-Is cost of doing business for all business areas.

5.3.2 Commonwealth Process Environment and Architecture

Commonwealth employees consistently identified travel as a relatively simple enterprise process that is inefficient and subsequently expensive to administer. This is evident by the noting following the conditions:

There is no enterprise-wide system for requesting travel...

- Lack of automated systems. There is no enterprise-wide system for requesting travel and for submitting, editing, and tracking authorizations and reimbursements.
- Lodging per diem rates may not reflect market conditions. Lodging per diem rates are relatively low requiring travelers on a frequent basis to obtain procedural permission to exceed allowances. The Commonwealth does not automate workflow processes to handle standard variance procedures.
- No standard approach to making reservations and coordinating estimated costs into the trip authorization process.
- Travel cards are not the primary form of payment. The majority of travel is paid by cash and individual credit cards. This system limits the benefits the state could gain from travel card rebate programs.

5.3.2.1 Process Environment

Travel policies and procedures are well documented. Every requirement for travel management is supported by written procedures. Please see Appendix B for a business decomposition graphic of this area. The functions of the business process are discussed below.

- **General process flows and/or decompositions, including starting and ending points.** Travel policies are applied consistently across the enterprise. Although some agencies have created internal restrictions and supplemental policies, all agencies perform the following activities:
  - **Budget authorization.** This is usually required for conference and training travel. Many agencies develop their travel budgets in a bottom-up approach by identifying training and conference needs and associated travel costs in advance. Once this budget has been approved, the agencies track each request against the original budget. Modifications to the plan require special approvals.
  - **Travel authorization** (obtaining approval for a specific trip). Developing a trip budget and obtaining, if required, travel advance funds.
  - **Booking/reservations.** The process of reserving transportation and lodging. Currently performed by travelers on their own, no structured approach exists for this activity among Commonwealth agencies.

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- **Reimbursement/voucher (**the process of reviewing receipts and reimbursement to the traveler). Copies of receipts are attached to the original reimbursement request and routed through the Agency approval process.

- **Variances, blockages, fragmentations.** The travel authorization and reimbursement process is primarily a paper process. Paper forms are completed and forwarded to managers for approval. It is impossible to know, at any given time, the location of a form in the process, why it is being held, or why a decision is deferred. Supporting information is often separated from the form requiring duplication of effort. The travel request form with authorization is returned to the originating employee as proof of trip approval when applying for reimbursement. Each step of the paper process provides a potential point for separation and delay.

Each step of the paper process provides a potential point for separation and disruption.

- **Points of process intersection, integration, and conflict.** The form must be approved by the originating agency as well as central staff responsible for payment and warrant processing. Multiple touch points, especially across agencies, provide additional opportunities for mistakes and redundant processing.

- **Controls and points of redundancies.** Throughout the review process, multiple individuals may verify receipts, per diem allowances, and pre-trip authorizations. The same information is often verified and re-verified.

- **Inconsistent out-sourcing.** Every traveler exercises individual discretion on travel arrangements. Some travelers will make their own arrangements while others will use local travel agencies. The Commonwealth has no central travel office or service provider responsible for securing optimal rates and booking travelers to contracted vendors.

- **Legal considerations.** Travel policies for all Executive Branch Agencies are administered under State Travel Regulation (20335). These administrative procedures set per diem travel rates and rules on the use of personal, state, and rental vehicles, common carriers, lodging, and meals. Legislative, Judicial and Independent agencies may establish their own travel policies. Non-executive Branch agencies that have adopted travel regulations that exceed the limits of 20335 must submit copies of their travel policies and procedures to the Department of Accounts.

5.3.2.2   Strengths and Weaknesses Review

Throughout our Due Diligence effort, Commonwealth staff consistently identified the following components of the travel process as being well developed with material strengths, as shown in Exhibit 5-17.

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Exhibit 5-17   Current Travel Strengths

Strengths	Comments
Policies – Travel policies are clearly disseminated. Travelers can easily obtain the policy and understand the rules, regulations, and their intent.	"All travel must be pre-approved" "Expenditures are limited to State reimbursement guidelines" "Good control over travel related expenditures" "All staff members have a copy of the State Regulation and Internal policies"
Prompt Reimbursements – Agencies recognize the need for prompt reimbursement of out-of-pocket travel expenses. Survey responses have indicated that agencies consistently meet this objective.	"Compliance quick authorization and processing of claims" "Direct deposit of reimbursed expenses" "Five day turnaround for a voucher"
Travel Authorization – Travel must be authorized in advance. Travel authorization requirements have been incorporated into the travel reimbursement process. A single form is often used for both the travel authorization approval process and ultimately for travel reimbursement.	"Cost benefit required prior to travel" "Requests and authorization are electronically processed"
EDI Payments – Travel reimbursements are expedited through direct electronic payment to employees that have elected to participate in this program.	"Quick deposit by EDI using REDIVirginia "Verify employees traveling more than twice are set-up on EDI before we release reimbursement"
Web-based Travel Forms – Travel forms can be easily downloaded and completed.	"Many elements of the authorization process including travel exceptions are incorporated into one travel authorization form" "The travel reimbursement voucher has been placed into a spreadsheet form to minimize mathematical errors and does automatic calculations of mileage reimbursement based on state car availability check boxes" "Travel authorization and reimbursement forms are provided to agency employees as on-line downloadable forms"

However, staff indicated that the travel management process is inefficient and that the current processes require a substantial commitment of resources. As shown in Exhibit 5-18, Commonwealth staff identified in their Due Diligence survey responses some of the following weaknesses in travel administration.

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Exhibit 5-18   Current Travel Weaknesses

Weaknesses	Comments and Recommendations
Lack of automated systems – There is no enterprise system for requesting travel and for submitting, editing, and tracking travel reimbursements.	Create a State Travel System using workflow and electronic signatures Provide online calculations of per diem rates All processes could be automated with interactive form flow Have automated edit checks built into the reimbursement voucher that calculates the amounts and totals Automated standardized form for approval and processing Automated routing of request for travel, booking arrangements, and reimbursement of expenses No tracking mechanism for submitted travel forms.
Lodging rates may not reflect market conditions – Survey respondents consistently expressed concern that lodging rates do not reflect current market conditions. Rates are considered too low requiring travelers on a frequent basis to obtain permission to exceed standard per diem allowances.	Unrealistic caps for lodging rates Lodging rates should be more reasonable and require less time to justify and document rates Eliminate Secretariat approval for Agency Heads for overage on lodging Approval to use on-line hotel reservation services
Deducting Commute Miles adds complexity with limited value – Policies require that travelers deduct the commuting distance from their home to their primary location. This is difficult to monitor.	Deducting commuting miles from business miles on overnight travel for a normal commuting day should be eliminated
State has no enterprise-wide hotel contracts – State has no enterprise-wide travel agency or lodging contracts to ensure reasonable rates for the level of business provided by State employees.	State should try and contract with major hotel chains for reduction in rates Travel agency support for airline tickets and hotels Initiate a state contract with a single travel agency for all of the state's business
Travel Card is not the primary form of payment – Survey responses demonstrate that the vast majority of travel is paid by cash and personal credit cards. The travel card is inefficiently applied. Rebates to the state have been sporadic and very low considering the overall level of state wide travel.	Travel advances could be eliminated if the State would underwrite a charge card for travel the current system is based on employee's credit. AMEX cards have become overly burdensome.

5.3.3 Reengineering and Re-solutioning Opportunities

Effective travel expense management can provide substantial efficiencies and with corresponding savings. For the greatest return, the solution must encompass more than software; it must also provide overall process orientation that will consistently lower costs, lower fraud and abuse, provide an environment for continuous improvement, and make the travel authorization and reimbursement

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process easier for Commonwealth employees. Team CGI-AMS see the following opportunities:

- **Strategic sourcing for travel services** – Provide a strategic source for travel agency services. Such an service provider could contract with hotels and airlines for discounts.
- **Deploy automated travel system** – Provide a system that will enable paperless routing of travel requests, authorizations, booking and expense reimbursement.
- **Supervisor certify travel documents** – Modify the reimbursement process to provide the immediate supervisor the authority to certify original travel documents. All subsequent approvals (beyond first line supervisor) and audits will be performed on electronic forms.
- **Modify reimbursement for employees' use of personal cars** – Aggregate multiple short trips on single (monthly) reimbursement process.
- **Automate travel rules testing** – Apply electronic testing of travel rules and eliminate audits of every travel voucher.

An Automated Travel Expense and Reporting System would provide an easier way to request, book, and submit travel expense reports. Most importantly this system will enable the Commonwealth to:

- Free up staff time to work on mission critical activities
- Instantly access, approve, or audit expense records across the enterprise
- Speed-up expense report processing and reimbursement
- Integrate with on-line travel booking and reservation systems
- Integrate travel with expenses incurred on approved travel cards
- Analyze expense data and better control Commonwealth spend
- Provide a mechanism to aggregate on a monthly basis travel reimbursement for business use of personally owned vehicles.

The automated system will be web-based, providing access to all employees from any location.

This system will be web-based, providing access to all employees from any location. These systems are relatively simple to implement and provide background edit checks for accounting codes, travel policies and rules, and reimbursement rates. Workflow will automatically route requests and variances to supervisors for review and flag travel reimbursement that exceeds statistical norms.

5.3.3.1 Organizational Approach or Service Delivery Model

The Automated Travel Expense and Reporting System would be an enterprise-wide solution that will permit agencies to configure their own unique rules and workflow. Agencies will configure the solution to meet their own requirements including:

- Linkage to agency financial systems
- Linkage to CARS for issuance of warrants
- Agency rules and per diem restrictions
- Agency approval rules for out-of-state and conference travel
- Agency supervisor and AP approvals for travel reimbursement

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- Agency rules for use of travel cards
- Agency expense reporting.

5.3.3.2 Transition or Implementation Path

Our travel solution is considered a long-term opportunity. Please see Chapter 9 for the implementation plan for the entire Initiative.

5.3.3.3 Linkage to the Virginia Enterprise Applications Architecture

By changing the tools and processes, the Commonwealth can reduce the administrative cost of travel by 50 percent.

The Automated Travel Expense and Reporting System would be completely integrated into the Virginia Enterprise Applications Architecture. All forms, workflow, and reporting will be linked to enterprise ERP and Business Intelligence solutions. In this case, VEAA would permit the new travel system to benefit from the following features:

- Connect to legacy systems without replacement
- Provide system enhancements (policies, rules and workflow) with only business analyst support
- Provide a common user interface for being alerted to status and work changes
- Creates an environment of "best managed" state by lowering the administrative costs of travel management
- Provide data for analytical interpretation
- Provide status tracking across the enterprise
- Apply consistent security.

The implementation of a focused travel management solution permits the Commonwealth to have a travel request and authorization process that requires only minutes to complete. The approved authorization will be incorporated into an agency's budget process and be simultaneously linked to travel card processing. Most importantly, the process will minimize the use of employee time for completing travel reimbursement forms while automating the review of expense data. By changing the tools and the processes, the Commonwealth can reduce the administrative cost of travel by 50 percent, provide unlimited reporting and query capabilities, move support personnel to other mission critical tasks, and gain a complete understanding of travel spend across the enterprise.

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